## SmartPro Compact Robot vacuum cleaner

FC8700/01

FC8700/71





#### **Philips Consumer Lifestyle**

# ServiceManual

#### **PRODUCT INFORMATION**

- This product meets the requirements regarding interference suppression on radio and TV.
- After the product has been repaired, it should function properly and has to meet the safety requirements as officially laid down at this moment.

#### **TECHNICAL INFORMATION**

| • Colour                               | : Deep Black & Basic<br>Blue |
|--|------------------------------|
| Battery type                           | : Li-Ion                     |
| <ul> <li>Battery voltage</li> </ul>    | : 12.8 V                     |
| Charging time                          | : 6 hour(s)                  |
| Runtime                                | : 80 min.                    |
| Usability                              |                              |
| <ul> <li>Threshold climbing</li> </ul> | : 13 mm                      |
| <ul> <li>24-hour scheduling</li> </ul> |                              |
| <ul> <li>Infrared sensors</li> </ul>   |                              |
| <ul> <li>Types of Floors</li> </ul>    | : Hardfloor                  |
|  |                              |

Smart detection system : 12 sensors

#### **Nozzles and accessories**

• Exhaust filter, AC power adaptor, Side brushes (2 pairs)

#### **Dimensions & weight**

| Dimensions     | : 60.1 x 330 mm |
|----------------|-----------------|
| Product weight | : 1.53 kg       |
| with packaging | : 2.9 kg        |

#### Accessories included

Docking station

#### **OPTIONAL** (accessories)

No specific issues

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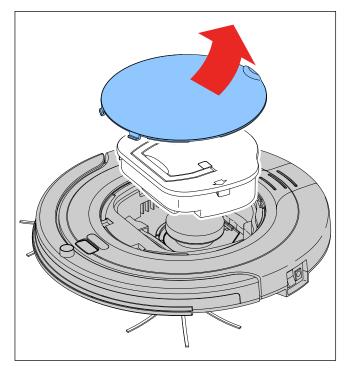
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Subject to modification



#### DISASSEMBLY - AND RE-ASSEMBLY ADVISE

- First make sure that the appliance is unplugged.
- To empty and/or replace the Dustbin assy, the Top Cover has to be removed (see picture).



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- Turn the appliance upside down .
- The brushes can easily be pulled out and replaced, after hearing the < click> the brush is placed in a correct way.
- Remove the battery cover by removing the 2 screws **A**, the battery can now be removed or replaced.
- To open the appliance: First remove the cover of the Bumper assy by removing the 4 screws **B**.

Remove the Upper housing by removing the 6 screws **C**, 2 screws are positioned in the battery compartment, **be aware** to unplug the wire.

• Now the wheel scan easily be pulled out and be replaced if necessary.

Remark: notice that each wheel assy have different wires to avoid mis-repair.

- To replace the inner parts of the Bumper assy: Lift the Main PCB by removing the 4 screws **D**, now you can replace the Bumper bracket by removing the 2 screws.
- To replace the Fan motor:

Turn the Bottom housing upside down and remove the 2 screws **F**, unplug the connector. Now the Fan motor can be replaced and re-connected.

#### **REPAIR INSTRUCTION**

#### IR Sensors calibration for replacing PCBA

Purpose: IR Sensors have to be calibrated if replacing PCBA. In order to avoid to move backward and abnormally.

#### **Calibration Steps:**

Step 1: Power off device and short calibration enable pin to ground pin with jumper(wire) shown as Fig. 1 and Fig. 2.

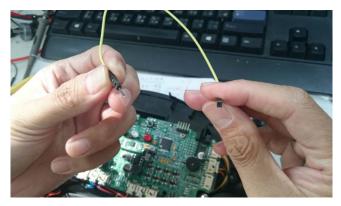


Fig. 1

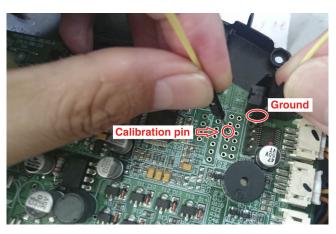
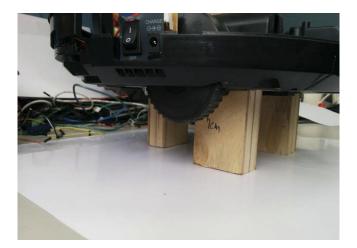


Fig. 2

Step 2: Put robot 7 cm height above calibration surface (AA papers).



Step 3: Power on Robot cleaner wait 5 seconds. Then the calibration is done. After finished the calibration, remove the jumper(wire).

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After calibration the robot need to be tested for the dropdown sensors: This can be done on a table. If the robot does not fall from the table the calibration was done in a proper way.

#### **Remark**:

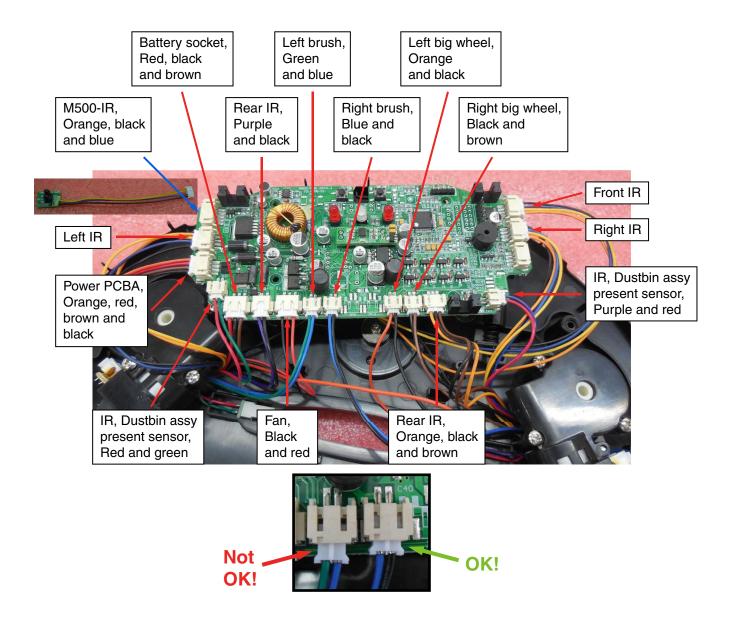
Material for white color reference: Using AA white paper or glossy paper as calibration surface.





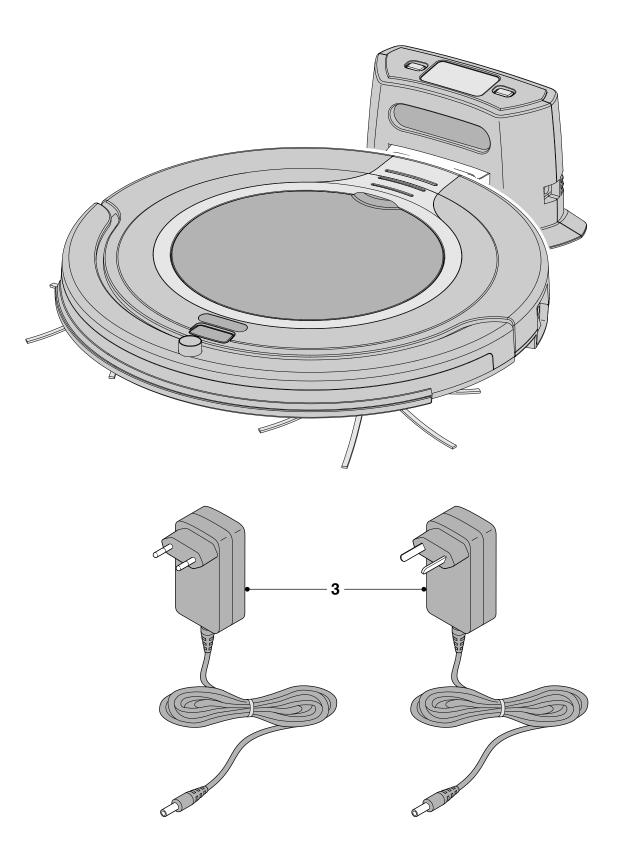
#### **REPAIR INSTRUCTION**

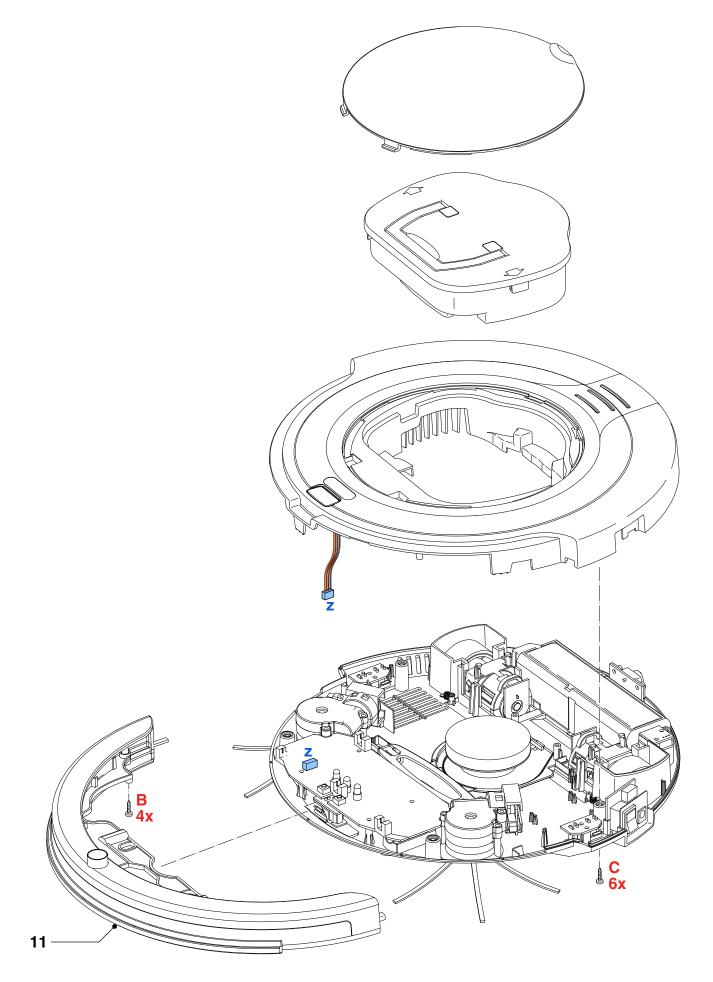
#### Wiring diagarm

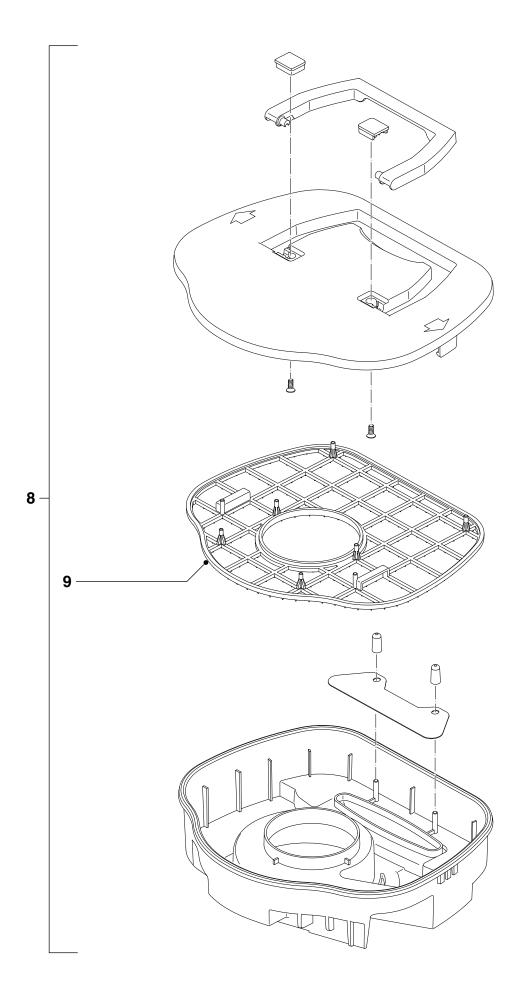


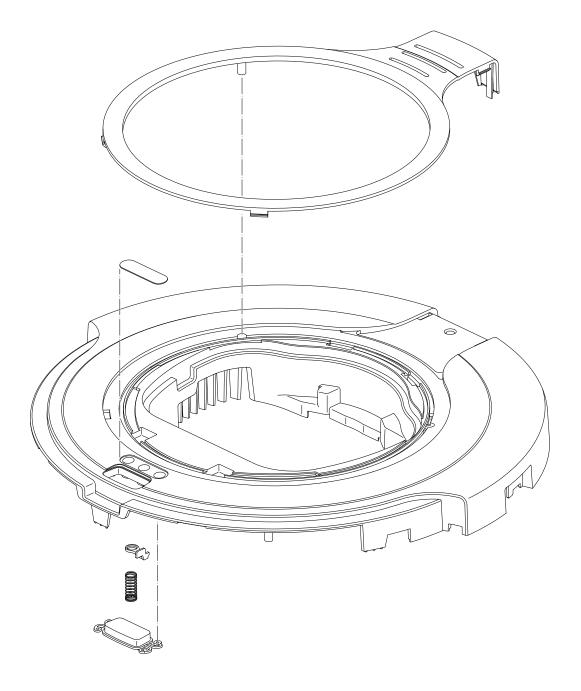
#### PARTS LIST

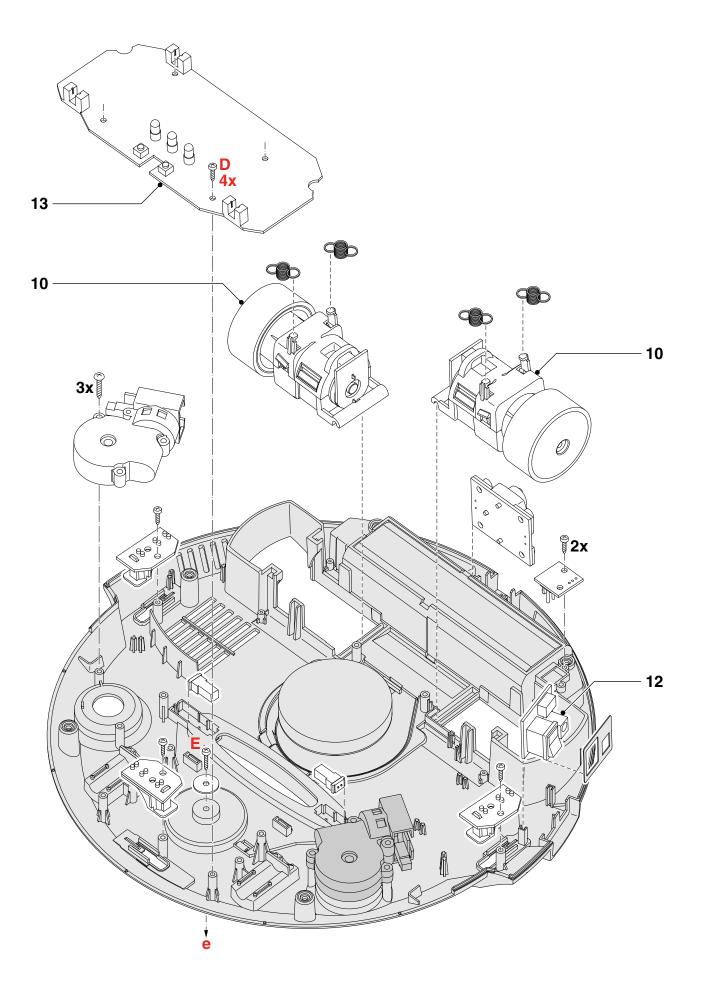
| Pos         | Service code   | Description  | Remark  |
|-------------|--|--|---|
| 1<br>2<br>3 | 4322 006 67901<br>4322 006 22901<br>4322 006 09961<br>4322 006 08901<br>4322 006 20951 | Suction motor assy A<br>Recharable battery 1300 mAh - 12.8 V<br>Switching adaptor 24 V - 1000 mA<br>Switching adaptor 24 V - 1000 mA<br>Switching adaptor 24 V - 1000 mA | Super Li-Ion<br>Euro plug<br>AU/NZ plug<br>Korea plug |
| 4           | 4322 006 23111   | Docking station A  |   |
| 5           | 4322 004 25961   | Side brush   |   |
| 6           | 4322 006 67941   | Side brush motor assy Left   |   |
| 7           | 4322 006 67951   | Side brush motor assy Right  |   |
| 8           | 4322 005 36651   | Dustbin assy A   |   |
| 9           | 4322 004 94152   | Filter Hawk A  | FC8700  |
| 10          | 4322 005 36681   | Big wheel assy M500 A  |   |
| 11          | 4322 005 36711   | Frint bumper assy A  |   |
| 12          | 4322 006 25401   | Power PCBA   |   |
| 13          | 4322 006 25811   | Main PCB   |   |

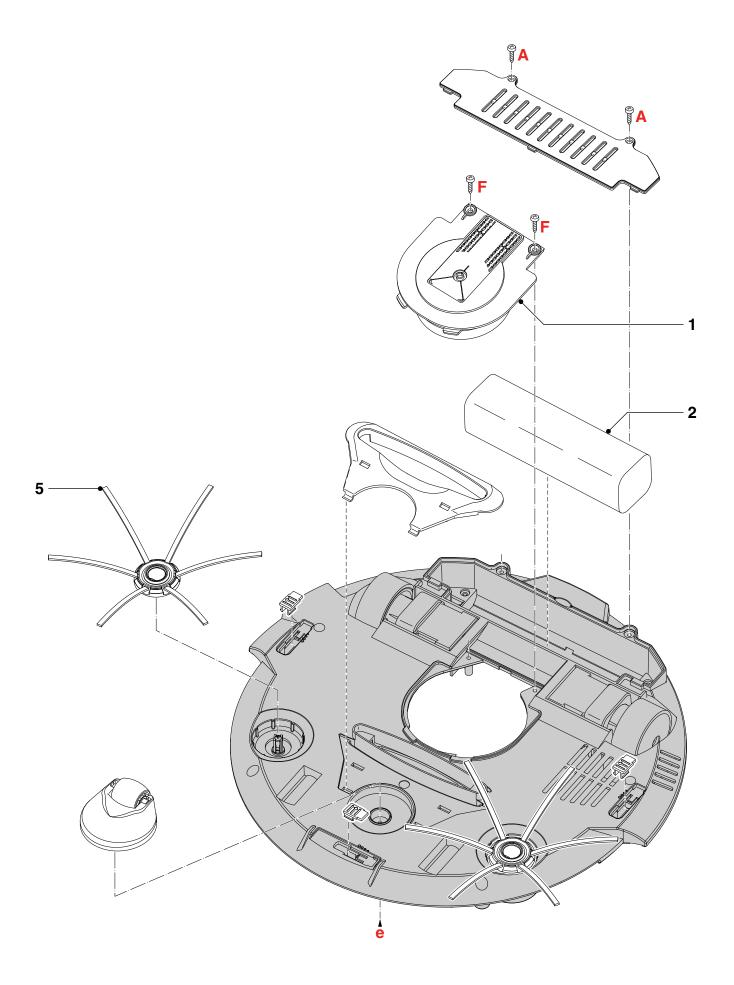


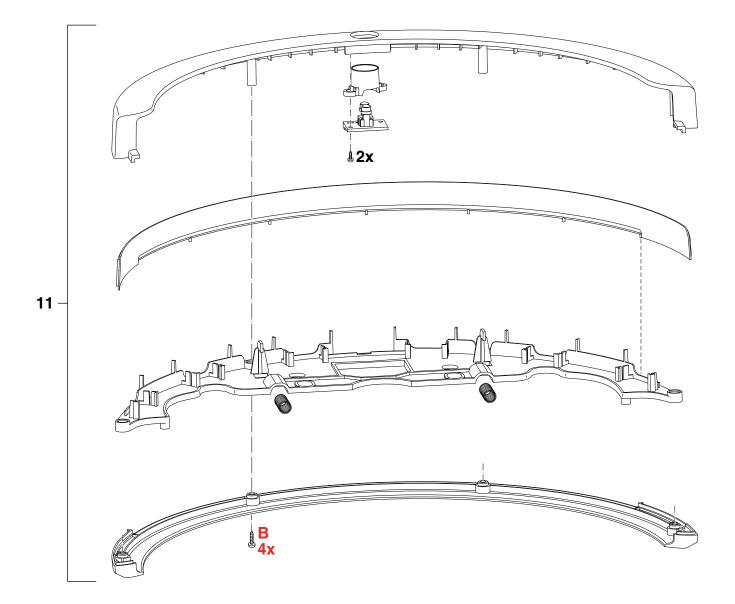


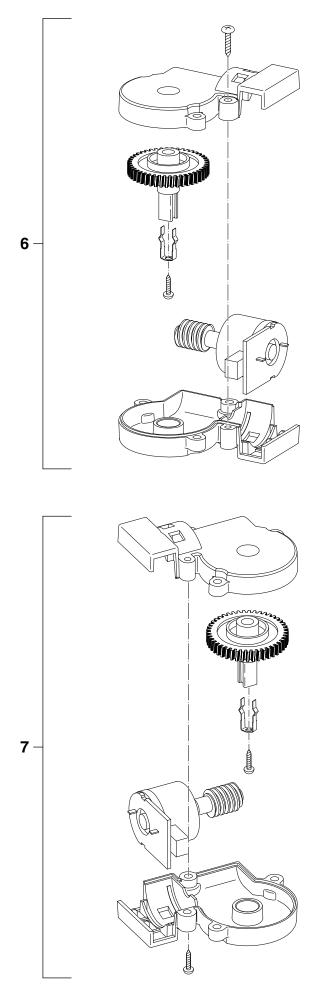


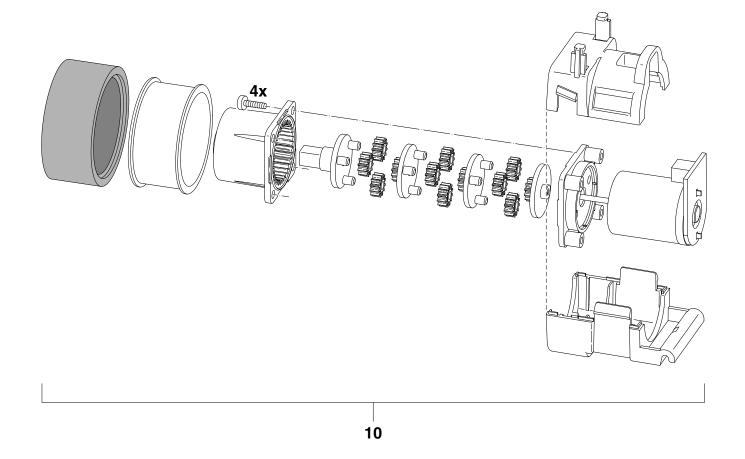


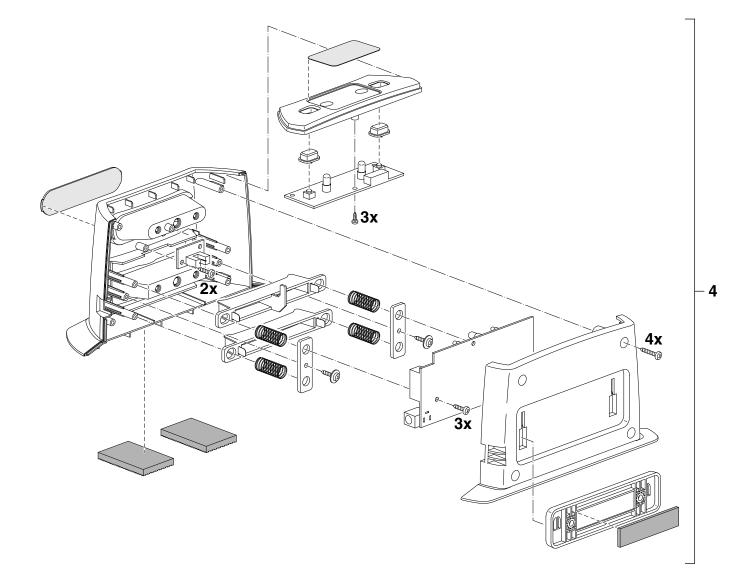












#### Version history

Version 1.1 : FC8700/01 initial release.

- Version 1.2 : Added new version: FC8700/71. In Parts List and Exploded view: Added Pos. 3: 4322 006 08901 Switching adaptor 24 V - 1000 mA AU/NZ plug.
- Version 1.3 : In Parts List at Pos. 9, changed 4322 004 94151 into 4322 004 94152.
- Version 1.4 : In Parts List at Pos. 13, changed 9965 100 72827 into 4322 006 25811. Added on page 3: IR Sensors calibration for replacing PCBA. Added on page 4: Wiring diagarm.
- Version 1.5 : In Parts List: Added Pos. 3: 4322 006 20951 Switching adaptor 24 V 1000 mA Korea plug.